



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/781,602

02/18/2004

Baruch Gedalia

06379.00005

2672

22908 7590 08/08/2007

BANNER & WITCOFF, LTD.
TEN SOUTH WACKER DRIVE
SUITE 3000
CHICAGO, IL 60606

EXAMINER

PAINTER, BRANON C

ART UNIT

PAPER NUMBER

3609

MAIL DATE

DELIVERY MODE

08/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/781,602

Applicant(s)

GEDALIA ET AL.

Examiner

Branon C. Painter

Art Unit

3609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/01/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 06/01/04 was filed after the mailing date of the non-provisional application on 02/18/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

2. The disclosure is objected to because of the following informalities:
 - a. Page 8, line 1, "PREFERRD." For the purpose of this examination, the examiner presumes this should read "PREFERRED."
 - b. Page 8, paragraph 25, line 5, "1S." For the purpose of this examination, the examiner presumes this should read "is."
 - c. Appropriate correction is required for all the preceding objections.

Claim Objections

3. Claim 8 is objected to because of the following informalities:
 - a. Claim 8, "seismic or in which the metal container is paraseismic stresses, surrounded." For the purpose of this examination, the examiner presumes this should read "seismic or paraseismic stresses, in which the metal container is surrounded." Appropriate correction is required.

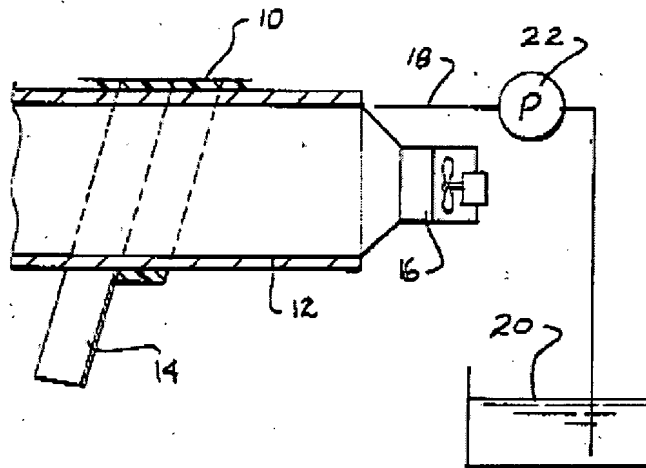
Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5-9, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Mandel (U.S. Patent No. 4,544,428).
6. Regarding claim 8, Mandel discloses a reinforced pressure tank having all of the applicant's claimed structure, including:
- a. "Metal container...surrounded over at least a part of its height with carbon fiber fabric bonded to the external surface of the metal container..." ("tank" 10 made of "lightweight metal" 12 surrounded by "fibers" 14 bonded with resin, Fig. 1; "wrapping an inner tank of aluminum having a wall thickness of 2 mm, with carbon fibers impregnated with a synthetic resin," column 2, lines 44-53).
 - b. "...the carbon fiber fabric being placed in bands extending substantially around the entire circumference of the metal container, predominantly in a direction substantially perpendicular to an axis of the metal container." ("resin-impregnated fibers" 14, Fig. 1).



Reproduced from U.S. Patent No. 4,544,428

7. Regarding claim 9, Mandel discloses carbon fiber fabric bonded so that the carbon fibers lie predominantly in a direction substantially perpendicular to the axis of the metal container ("resin-impregnated fibers" 14, Fig. 1).
8. Regarding claim 10, Mandel discloses a partly-filled metal container being surrounded with a carbon fiber fabric without being emptied ("tank" 10 is filled with air, Fig. 1).
9. Regarding claims 12 and 13, Mandel discloses carbon fiber fabric bonded to the metal container in several superposed layers [claim 12], wherein the number of superposed layers varies with height [claim 13] ("The wall thickness of the wrapping varies in accordance with the shape of the tank and amounts to a multiple of the inner tank wall thickness," column 2, lines 44-53).
10. Regarding claims 1-3, 5, and 6, the structure of the apparatus renders the claimed method steps inherent since the claimed method steps would inherently be performed when assembling the reinforced metal container as disclosed by Mandel.

Art Unit: 3609

11. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Enders et al. (DE 3,826,434; Derwent 1989-062184).
12. Regarding claim 8, Enders et al. discloses a reinforced tank having all of the applicant's claimed structure, including:
 - a. Metal container...surrounded over at least a part of its height with carbon fiber fabric bonded to the external surface of the metal container..." (metal tank with at least part of its exterior bonded with epoxy resin to layers of fabric that can contain "carbon or glass fiber mat," Derwent Abstract).
 - b. "...the carbon fiber fabric being placed in bands extending substantially around the entire circumference of the metal container, predominantly in a direction substantially perpendicular to an axis of the metal container." (fabric layers are bonded to at least part of its exterior, Derwent Abstract; fabric layers 11a-i, Fig. 1).
13. Regarding claim 1, the structure of the apparatus renders the claimed method steps inherent since the claimed method steps would inherently be performed when assembling the reinforced tank as disclosed by Enders et al.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

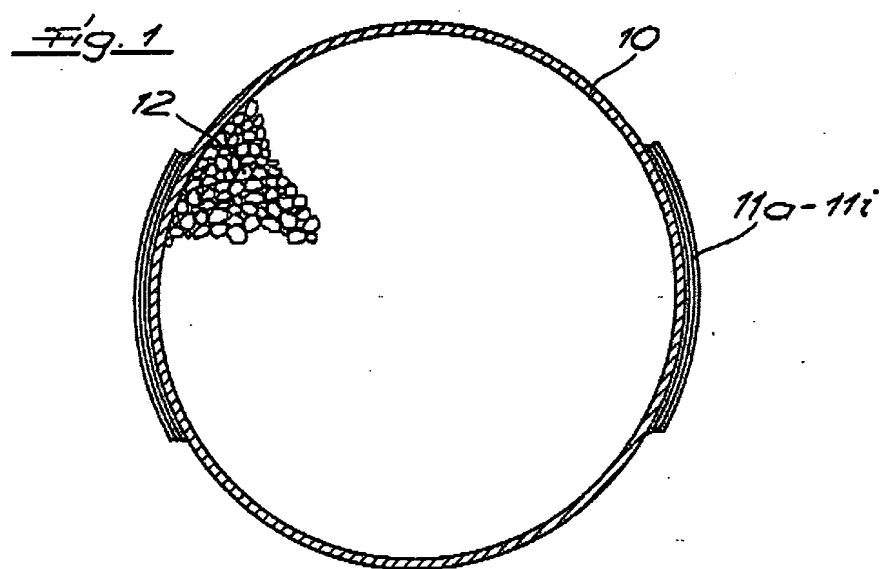
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mandel (U.S. Patent No. 4,544,428) in view of Toth et al. (U.S. Patent No. 4,614,279).

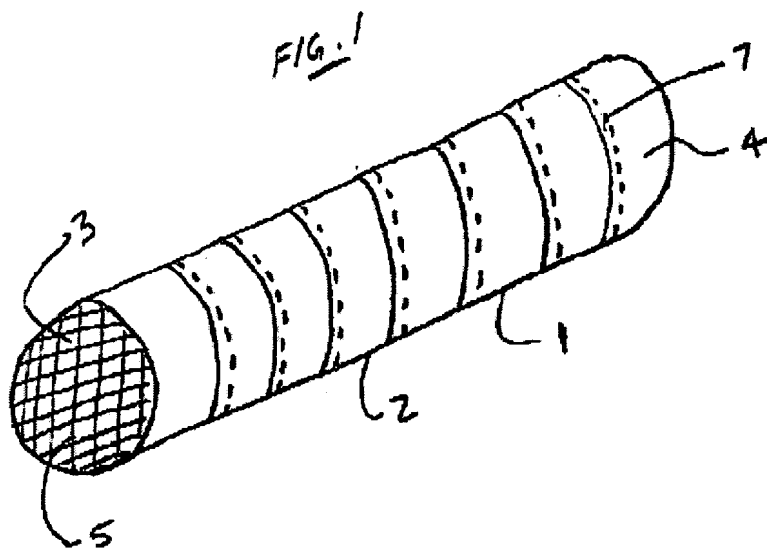
- a. Mandel discloses a reinforced pressure tank as set forth above.
- b. Mandel does not expressly disclose redirecting the bonded carbon fiber fabric in order to bypass projecting regions of the container.
- c. Toth et al. discloses wrapping filaments in a way that bypasses a pressure vessel projection ("An obvious solution to the problem is to cut access openings in the liner which is to serve as the winding mandrel and then plug those openings with temporary closure members which serve to direct the winding filaments around the access openings," column 1, lines 51-62). Wrapping the carbon fiber fabric of Mandrel around projections as taught by Toth et al. is a method well-known in the art and allows the fibers to be bonded around the projection without covering the projection or being severed at points around the projection.

- d. Mandel and Toth et al. are analogous art because both are from the field of endeavor of reinforced metal containers.
 - e. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the carbon fiber fabric bonding of Mandrel by providing a method to bypass projections as taught by Toth et al., in order to reinforce the area near the projection.
 - f. Regarding claim 11, the combined method steps render the claimed apparatus obvious since such would be the logical product formed from the combination.
17. Claims 5, 7, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enders et al. (DE 3826434; Derwent 1989-062184) in view of Roy (U.S. Pub. No. 2002/0088805).
- a. Enders et al. discloses a reinforced tank as set forth above.
 - b. Enders et al. does not expressly disclose that the carbon fiber fabric is placed in superimposed bands offset from each other by half the width of a band [claims 5, 7, 12, and 14].
 - c. Roy discloses fabric that extends around the entire surface of the metal container and is placed in superimposed bands offset from each other ("sheet material" 4 with "overlap" 7, Fig. 1) [claims 5 and 7]. Wrapping the carbon fiber fabric of Enders et al. in overlapping fashion as taught by Roy ensures the entire structure has some amount of reinforcement.

- d. The examiner notes that although Roy does not explicitly disclose that the fabric bands overlap each other by half the width of a band, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an overlapping pattern where bands overlap each other by half the width of the band, since that wrapping pattern allows for the entire metal container to be uniformly reinforced. This uniform reinforcement prevents the introduction of weak portions to the container during the wrapping process [claims 7 and 14].
- e. Enders et al. and Roy are analogous art because both are from the field of endeavor of wrapped metal containers.
- f. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the reinforced tank of Enders et al. with a wrapping pattern as taught by Roy, in order to produce a uniformly reinforced container.
- g. Regarding claims 12 and 14, the combination renders the claimed method steps obvious since such would be the logical manner of using the combination.



Reproduced from DE 3826434



Reproduced from U.S. Pub. No. 2002/0088805

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3609

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Branon C. Painter whose telephone number is (571) 270-3110. The examiner can normally be reached on Mon-Fri 7:30AM-5:00PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached on (571) 272-6987. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Victor Batson
Supervisory Patent Examiner
Art Unit 3609

Branon Painter
07/26/2007